



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/611,552	06/30/2003	Kevin Brown	SVL920030003US1	5006

28342 7590 12/21/2005

SAMUEL A. KASSATLY LAW OFFICE
20690 VIEW OAKS WAY
SAN JOSE, CA 95120

EXAMINER

PYO, MONICA M

ART UNIT PAPER NUMBER

2161

DATE MAILED: 12/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/611,552	Applicant(s) BROWN ET AL.	
	Examiner Monica M. Pyo	Art Unit 2161	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 June 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 June 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>6/30/2003</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1-30 present for examination.
2. Claims 1-30 are rejected.

Information Disclosure Statement

3. The information disclosure statement (IDS) submitted on 6/30/2003 was filed. Accordingly, the information disclosure statement is being considered by the examiner.

Drawings

4. Figure 1 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g).

Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 9-13 and 18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Art Unit: 2161

Regarding Claim 11, the term "link value" is a relative term which renders the claim indefinite. The term "link value" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. For the examining purpose, the examiner will treat the term "link value" as the related subject value from one record to another.

Regarding Claims 9-13 and 18, the phrase "if" and the phrase "if & does not" conditions render the claim indefinite because it is unclear whether the limitation(s) following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Art Unit: 2161

6. Claims 1-3, 19-21, 26-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,870,751 issued to Trotter (hereafter Trotter), and further in view of U.S. Patent No. 6,128,771 issued to Tock et al. (hereafter Tock).

Claims 1 and 19:

Regarding Claim 1, Trotter discloses a method of efficiently writing records from an in-memory database to a disk database, comprising (see Abstract):

- linking the records by a linked list (Trotter: col. 4, lns. 60-67; col. 5, lns. 1-8; fig. 2)
- creating a header data structure of the linked records (Trotter: col. 6, lns. 23-59; fig. 2)
- linking a new record in the in-memory database to the header data structure (Trotter: col. 7, lns. 58-67; col. 8, lns. 1-21; fig. 4); and
- records in the linked list (Trotter: fig. 2)

However, Trotter does not explicitly disclose:

- transferring the records in the linked list and the new record from the in-memory database to the disk database using the header data structure.

On the other hand, Tock discloses:

- linking the records by a linked list (Tock: col. 5, lns. 29-42), transferring the records in the linked list and the new record from the in-memory database to the disk database using the header data structure (Tock: col. 3, lns. 17-21, 64-67; col. 4, lns. 1-6; fig. 1).

It would have been obvious to a person having ordinary skill in the art at the time of

Art Unit: 2161

invention to combine this transferring information of Tock into the listed link of Trotter to utilize the record transfer from in-memory to disk memory <persistent storage>. Skilled artisan would have been motivated to incorporate the Tock's teaching of transferring information in the Trotter's linked list system to improve the process of in-memory records as suggested by Tock, which discloses "copy objects in the computer's main memory that contain new or modified data into corresponding persistently stored objects upon the occurrence of predefined events, such as the completion of a transaction" (Tock: see Abstract). Claim 19 is rejected based upon the same reasoning as Claim 1.

Claims 2 and 20:

Regarding Claim 2, Trotter in view of Tock disclose all the limitation of Claim 1, *supra*. Additionally, Trotter discloses: wherein each record contains information about a single transaction (Trotter: col. 8, lns. 38-60, Relationship Parcel Example 2). Claim 20 is rejected based upon the same reasoning as Claim 2.

Claims 3 and 21:

Regarding Claim 3, Trotter in view of Tock disclose all the limitation of Claim 1, *supra*. Additionally, discloses: wherein the header data structure comprises an entity name that identifies the record (Trotter: col. 6, lns. 32-59, Header Example 1). Claim 21 is rejected based upon the same reasoning as Claim 3.

7. Claims 4-18, 22-25 and 29-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Trotter in view of Tock as applied to claims 1-3, 19-21, 26-28 above, and further in view of U.S. Patent No. 5,016,221 issued to Hamstra (hereafter Hamstra).

Art Unit: 2161

Claims 4, 22 and 29:

Regarding Claim 4, Trotter in view of Tock disclose all the limitation of Claim 3, *supra*.

However, Trotter in view of Tock do not disclose: wherein the header data structure further comprises a last commit pointer.

On the other hand, Hamstra discloses: wherein the header data structure further comprises a last commit pointer (Hamstra: col. 4, lns. 7-17 – Hamstra discloses the <commit pointer> which corresponds to a last commit pointer).

It would have been obvious to a person having ordinary skill in the art at the time of invention to combine the transferring information of Tock and the listed link of Trotter into the first-in and out memory configuration of Hamstra to utilize a read pointer and a commit pointer. Skilled artisan would have been motivated to incorporate the Tock's teaching of transferring information and the Trotter's linked list system in the first-in and out memory configuration of Hamstra to improve the process of in-memory records as suggested by Hamstra, which discloses "the faster a processor can examine its received instructions and/or data and determine whether they are to be retained for use or discarded, the faster the processor can accept and process new instructions and/or data" (Hamstra: col. 2, lns. 1-9). Claims 22 and 29 are rejected based upon the same reasoning as Claim 4.

Claims 5 and 23:

Regarding Claim 5, Trotter in view of Tock, and further in view of Hamstra disclose all the limitation of Claim 4, *supra*. Additionally, Hamstra discloses: wherein the header data structure further comprises a last flush pointer (Hamstra: col. 4, lns. 7-17 – Hamstra discloses the

Art Unit: 2161

<write pointer> which corresponds to a last flush pointer). Claim 23 is rejected based upon the same reasoning as Claim 5.

Claims 6, 24 and 30:

Regarding Claim 6, Trotter in view of Tock, and further in view of Hamstra disclose all the limitation of Claim 5, *supra*. Additionally, Trotter discloses: wherein the header data structure further comprises a head pointer (Trotter: col. 6, lns. 32-50, Header Example 1; col. 7, lns. 37-46 – Trotter discloses <relnhead> which corresponds to a head pointer). Claims 24 and 30 are rejected based upon the same reasoning as Claim 6.

Claims 7 and 25:

Regarding Claim 7, Trotter in view of Tock, and further in view of Hamstra disclose all the limitation of Claim 6, *supra*. Additionally, Trotter discloses: wherein the header data structure further comprises a tail pointer (Trotter: col. 6, lns. 32-50, Header Example 1; col. 7, lns. 37-46 – Trotter discloses <reIntail> which corresponds to a tail pointer). Claim 25 is rejected based upon the same reasoning as Claim 7.

Claim 8:

Regarding Claim 8, Trotter in view of Tock, and further in view of Hamstra disclose all the limitation of Claim 7, *supra*. Additionally, Trotter and Tock disclose: further comprising locating a new header data structure for the new record (Trotter: col. 6, lns. 23-50, Header Example 1) & (Tock: col. 3, lns. 8-22)

Claim 9:

Regarding Claim 9, Trotter in view of Tock, and further in view of Hamstra disclose all the limitation of Claim 8, *supra*. Additionally, Trotter and Tock disclose: further comprising

Art Unit: 2161

determining if the head pointer in the header data structure of the new record points to another record (Trotter: col. 4, lns. 60-67; fig. 2) & (Tock: col. 3, lns. 8-22)

Claim 10:

Regarding Claim 10, Trotter in view of Tock, and further in view of Hamstra disclose all the limitation of Claim 9, *supra*. Additionally, Trotter and Tock disclose: wherein if the head pointer in the header data structure of the new record points to another record getting the other record (Trotter: col. 7, lns. 46-57; fig. 3) & (Tock: col. 3, lns. 8-22).

Claim 11:

Regarding Claim 11, Trotter in view of Tock, and further in view of Hamstra disclose all the limitation of Claim 10, *supra*. Additionally, Trotter discloses: further comprising setting the tail pointer of the other record equal to a link value of the new record (Trotter: col. 7, lns. 37-46; col. 10, lns. 43-56; fig. 3).

Claim 12:

Regarding Claim 12, Trotter in view of Tock, and further in view of Hamstra disclose all the limitation of Claim 7, *supra*. Additionally, Hamstra discloses: further comprising determining if the last commit pointer of the header data structure points at a record (Hamstra: col. 7, lns. 44-58; fig. 3D).

Claim 13:

Regarding Claim 13, Trotter in view of Tock, and further in view of Hamstra disclose all the limitation of Claim 12, *supra*. Additionally, Hamstra and Trotter disclose: further comprising setting the last commit pointer equal to the head pointer if the last commit pointer

Art Unit: 2161

does not point to a record (Hamstra: col. 7, lns. 13-16; fig. 3A) & (Trotter: col. 6, lns. 34-54, Header Example 1; col. 7, lns. 37-43; fig. 3).

Claim 14:

Regarding Claim 14, Trotter in view of Tock, and further in view of Hamstra disclose all the limitation of Claim 12, *supra*. Additionally, Hamstra discloses further comprising getting the record to which the last commit pointer points (Hamstra: col. 7, lns. 44-58; fig. 3D).

Claim 15:

Regarding Claim 15, Trotter in view of Tock, and further in view of Hamstra disclose all the limitation of Claim 14, *supra*. Additionally, Hamstra discloses: further comprising determining whether there is a last record after the record to which the last commit pointer points (Hamster: col. 8, lns. 16-22; fig. 3E).

Claim 16:

Regarding Claim 16, Trotter in view of Tock, and further in view of Hamstra disclose all the limitation of Claim 15, *supra*. Additionally, Trotter and Hamstra disclose: further comprising writing to the disk memory all records in the link list that occur after the record to which the last commit pointer points (Trotter: col. 12, lns. 50-67, Relationship Extension Parcel Example 5; col. 13, lns. 1-6) & (Hamstra: col. 4, lns. 7-16).

Claim 17:

Regarding Claim 17, Trotter in view of Tock, and further in view of Hamstra disclose all the limitation of Claim 16, *supra*. Additionally, Hamstra and Trotter disclose: further comprising setting a last flush pointer of the header data structure equal to the last count if the writing of the records to the disk memory ended successfully (Hamstra: col. 7, lns. 44-58; fig.

3D) & (Trotter: col. 8, Ins. 34-50, Relationship Parcel Example 2; col. 9, Ins. 29-30, Subject Parcel Example 3; col. 10, Ins. 11-12).

Claim 18:

Regarding Claim 18, Trotter in view of Tock, and further in view of Hamstra disclose all the limitation of Claim 17, *supra*. Additionally, Hamstra discloses: further comprising setting the last flush pointer equal to the last commit pointer if the writing of the records to the disk memory did not end successfully (Hamstra: col. 8, Ins. 27-34; fig. 3C).

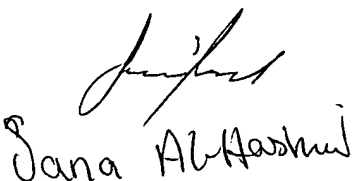
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Monica M. Pyo whose telephone number is 571-272-8192. The examiner can normally be reached on Mon-Fri 6:30 - 3:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Safet Metjahic can be reached on 571-272-4023. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Monica M Pyo
Examiner
Art Unit 2161


Jana Al-Hashmi

Application/Control Number: 10/611,552

Page 11

Art Unit: 2161

mp

12/19/05